From buds to flowers

The blossoming of Child Language and Multimodal Analyses

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Christophe Parisse, Martine Sekali, Naomi Yamagushi

And special thanks to Brian MacWhinney
Longitudinal follow-ups 0 to 7 transcribed, linked, on line

Pluridisciplinary team
(inguists, psychologists, speech-therapists, anthropologists, artists)

Linguistic development

Phonology

Prosody

Gesture

Cognition

Morpho-syntax

Discourse

Pragmatics

Multi-modal analyses

CORPUS

Computer Tools

Descriptors

+ +
Number of pointing gestures per one hour session
Number of pointing gestures towards an animate referent per one hour session
Adrien
Recorded by Naomi Yamagushi
(PhonBank)

Madeleine
Recorded by Martine Sekali
Paris corpus (CHILDES)
I. Repairs

II. Links to phonological development?

III. From phonology to syntax?
Children’s « errors »

« Barbarisms » (Egger, 1879)

« Incorrect forms » (Buhler 1926)

« Emergent categories » (Clark 2001)

« Systematic transitory patterns » (Cohen 1924)
I. Repairs
Attempt at a definition

R
Reformulation …
Rectification …
Repair …

SELF
OR
OTHER

meaning and/or form

Target
Example of a repair sequence (1;9)
Why investigate Repair sequences?

- Retracing the acquisition of linguistic and interactional rules (Clark 1993; Clark & Chouinard 2000, Chouinard & Clark 2003; Forrester 2008)
- Understanding what the child takes into account (Morgenstern, Leroy, Caët, in press)
- Understanding the parents’ representations of their child’s linguistic, discursive and cognitive abilities
The linguistic levels involved in repair sequences

From Other to Self repairs

Data, coding and quantitative analyses
Three longitudinal corpora

Théophile
0;7 to 5;00

Madeleine
0;10 to 5;00

Anaé
0;3 to 4;00
Different landmarks

Child as landmark

Miam miam

Adult as landmark

C’est bon

Théophile

C’est délicieux

Anaé

Madeleine

18
Mean Length of Utterance according to age
Total number of words (tokens)
Number of different words (types)

- Théo
- Mad
- Anaé
Self repairs
- Elicited repairs
- Spontaneous repairs

Other repairs
- Direct repairs
- Indirect repairs

Linguistic levels
- Pragmatic
- Semantic
- Morpho-syntactic
- Phonological

Coding

Taken up
Not taken up
**Madeleine 1;09:**

*CHI: un aut(re), un balai
   another broom

*MOT: ça c’est une pelle
   that’s a spade

%rep: direct other-repair at the lexical level, taken up by the child
   (D OR L T)

*CHI: pelle
   spade

**Madeleine 1;09:**

*CHI: (v)eux Chachance !
   want Mump

*MOT: comment ?
   pardon ?

*CHI: elle est là Achance .
   Emp is here

%rep: elicited self-repair involving phonology and morphosyntax
   (E SR PM)
Quantitative analyses (1)

Proportion of repairs according to age
Quantitative analyses (2)

Proportion of repairs according to MLU
From other- to self-repairs
Proportion of other and self repairs in the data
From other to self-repairs
1) Adult targets provided by the child

Madeleine 1;09:
Indirect other-repair, taken up by the child
*CHI: e nenët e sases
*MOT: des lunettes où ça? where do you see glasses?
*CHI: e nynët e la the gasses are there.

Madeleine 2;04:
Direct other-repair, taken up by the child
*MOT: t'es bien dans tes chaussures ? Do your shoes feel good?
*CHI: oui. yes
*CHI: j'ai (est ? es ?) bien. They feels good
*MOT: bon. je suis bien. Well, they feel good.
*CHI: je suis bien. They feel good.
From other to self-repairs
2) Self-repairs elicited

Madeleine 1;09:
Elicitation of self-repair with negation
*MOT: Et celui-là il est... and this one is...
*CHI: ++jaune. yellow
*MOT: hum, pas tout à fait. Hem, not exactly
*CHI: 0.
*MOT: orange. orange
*CHI: orange. orange

Madeleine 2;04:
Sollicitation of self-repair with pronoun
*CHI: c’est pour clocher les cloches. It’s to bell the bells.
*MOT: pour quoi ? To what?
*CHI: pour sonner les cloches. To ring the bells.
From other to self-repairs

2) Self-repairs elicited
Madeleine 2;11: 
Spontaneous self-repair

*CHI: euh toi <tu vas voir> [//] <tu vas nous regard(er)> [//] tu vas nous [/] <nous film[er]> [//] (.) tu vas nous filmer en+train+de jouer . ehm you < you are gonna see> < you are gonna watch> you are gonna (.) you are gonna film us while we play.
Linguistic levels involved in repair sequences
Linguistic levels involved in other-repairs FREQUENCY

Insights into the parent’s representation of their child’s development

Pragmatics
Semantics
Morpho-syntax
Phonology
**Phonological level**
Madeleine 1;09

*CHI: e nenɛt
glasses
*MOT: des lunettes où ça?
glasses? Where?
*CHI: e nynɛt e la
here glasses

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**Lexical level**
Madeleine 1;09

*CHI: un aut(re), un balai
another broom
*MOT: ça c’est une pelle
that’s a spade
*CHI: pelle
spade

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**Morpho-syntactic level**
Madeleine 2;04

*CHI: elle s’endorma
she fell asleep
*MOT: elle s’endormit?
*CHI: s’enRdormit
fell asleep

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**Pragmatic level**
Madeleine 2;04

*CHI: tu peux apporter de l’eau, là comme ça je bois de l’eau là.
Can you bring water so that I drink water?
*MOT: ah, comment est-ce qu’on dit? Oh, what do you say?
*CHI: je voudrais…I would like
Linguistic levels involved in other-repairs
EXAMPLES
Linguistic levels involved in self-repairs

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Pragmatics
Semantics
Morphosyntax
Phonology
Example of a **self-repair**

Je veux, euh, je **voudrai**, hum, je **voudrais** une glace maman.

I want, hem, I will, I would like an ice-cream mum.
Conclusions of this study
II. Links to phonological development?
percentage of other-repairs

Age

- pragmatic
- semantic
- morpho-syntactical
- phonological

40
Naomi Yamagushi
PhD student

Intense user of PHON
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Heather, Joe, Paula, Mits, Laetitia…

Playing around with Phonology
Don’t present vowel inventories to phonologists!

Some vowels at 1;09

ã : 102/125
õ : 40/46
œ : 52/55
y : 53/57
ø : 15/19
### Consonantal inventory, singleton + cluster, ONSET

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| 1:06| ok | ok | ok | ok | ok | ok | ?(1)| e/c| ok(?)| ok(?)| ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | e/c(1) | ok(1)
| Mad |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |
| 1:09| ok | ok | ok | ok | ok | ok | e/c| ok | ok | ok | e/c| e/c| ok | ok | ok | ok | ok | ok | ok | ok | (pv) | (50%) | ok |
| Mad |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |
| 2:01| ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | e/c| ok | ok | ok | ok | ok | ok | ok | ok | (seg) | e/c | ok |
| Mad |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |
| 2:04| ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | ok | e/c| ok | ok | ok | ok | ok | ok | ok | ok | (seg) | e/c | ok |

### Consonantal inventory, singleton + cluster, CODA

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Questions ➡️ Mits’s answers!!!
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## Clusters, CODA

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3 syllable target (or more) at 2;01

15/26 were not like target

1) Consonnant clusters
læskalje ↔ lækalje

2) Missing a nasal or a different vowel
pātalā ↔ patalā

3) Omission of one syllable (9/26)
kanape ↔ kape
netwaje ↔ toje
kāguku ↔ kuku

Cynthia’s PLUG-IN
III. From phonology to syntax?
Syntax: Verbal constructions
From incomplete to complete patterns
Verb frame 3

Verbs with three arguments: DONNER

Tu donnes le biberon à la poupée? / Are you giving the bottle to the doll?
DONNER  TO GIVE

Madeleine  Adult

Period 1: up to 2;03
Incomplete forms, with phonological deviations and instability

Period 2; after 2;03
Adult pattern S + V + 2 args: **90 %**
Receipient is a pronoun
Object is very often lexical

S + V + 2 arguments: **80 %**
Receipient is a pronoun
Object is either lex or pron
Syntax: complex sentences and elliptic packaging
1) elliptic use of POUR
Deviant uses

POUR

Adult uses

Deviant uses

Creative coherent pattern

Sekali, Morgenstern, 2008
Pour
+ Noun Phrase

Pour
+ non finite Clause

Pour que
+ finite Clause

1) Pour (prep) + Noun Phrase

2) Pour (comp) + Noun Phrase

3) Pour (comp) + non finite Clause

4) Pour (comp) + finite Clause

5) Pour que (comp) + finite Clause

Pour maman
For Mummy

Pour Madeleine
For Madeleine

Pour faire tes courses
To do the shopping

Pour je bois de l’eau
So I drink water

Pour que je me salisse pas
So that I don’t get dirty
Ex 1: File "MADELEINE-1_10 line 728.

*CHI* has just given *OBS* a card with a picture of a cup of coffee

*OBS:* merci / thank you

*CHI:* ### pou(r) toi / for you

*OBS:* merci Madeleine ha:n # c' est gentil.

thank you Madeleine, that’s nice.
Deviant use

**POUR** + Noun Phrase

**Complementizer** ?

- Le doudou **pour** Madeleine
- The bunny **for** Madeleine
Ex 2: Pour + GN complementizer?

Le doudou pour Madeleine

[le doudou] pour que [Madeleine console la mère]
[The bunny] for [Madeleine to console the mother]
1) She’s looking for a bunny
2) The recipient of the bunny
3) Her intention to use the bunny to console the mother
Syntax: complex sentences and elliptic packaging

2) elliptic use of PARCE QUE
Example 9 – Mad 2;07

*Madeleine enters the house.*
Child: **Maman, je veux enlever mon manteau** parce que j'ai froid *(que j'ai mis)*

A
Mummy I want to take off my coat

B
because I’m cold.

I’ve got a coat on
Ex 10 *** MADELEINE-16-2_04_15.CHA" : line 1465.
*MOT: Ca+y+est Madeleine [>] ? Are you done Madeleine?
*CHI: oui [<] . Yes.
*MOT: allez tu r(e)montes ta culotte. Come on pull your panties back up.
*OBS: c'est drôlement bien hein qu(e) tu portes <plus d(e) couches Madeleine> [>] . How great that you’re not wearing diapers any more Madeleine.
*CHI: <moi je [//] je remets> [<] ma culotte (1)parc(e)+que j' ai [//] j' a fait pipi [<] .
I’m pulling up my panties (which I had pulled down) because I had a wee
Ex 10 *** MADELEINE-16-2_04_15.CHA": line 1465.
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*CHI: <moi je [/] je remets> [<] ma culotte (1)parc(e)+que j' ai [//] j' a fait pipi [<] .
I’m pulling up my panties (which I had pulled down) because I had a wee
From binary to ternary structures
*CHI: yy yy maintenant <je vais> [/] je vais chercher un jeu. now, I’m gonna, I’m gonna look for a game.
*CHI: (. ) j' enlève mes chaussures parce+que je vais montrer un jeu parce+que moi je vais monter sur mon lit. I’m taking off my shoes because I’m gonna show a game because. I’m gonna climb on my bed.
*CHI: et quand on monte sur un lit <i(l) f(aut)> [/] il faut euh enlever les chaussures. and when you climb on a bed, you must, you must, hem, take off your shoes.
*OBS: oui . yes
CONCLUSION
Thank you

Contact : Aliyah.Morgenstern@gmail.com